

CLAIMS

1 1-32. (canceled)

1 33. (new). A network device for a communication network, the network device comprising:

2 (a) a database table adapted to:

3 (1) store one or more sets of one or more parameters, each set corresponding to a
4 different identifier; and

5 (2) allow updating of a first set of one or more parameters, the first set
6 corresponding to a first identifier, wherein the updating is based on data packets received from a
7 first transmitter corresponding to the first identifier; and

8 (b) a receiver adapted to:

9 (1) receive a first data packet from the first transmitter, the first data packet
10 comprising a header and a payload;

11 (2) receive a first auxiliary coding corresponding to the first data packet, wherein:
12 the first auxiliary coding identifies the first identifier;

13 (3) recover the first identifier from the first auxiliary coding;

14 (4) retrieve the first set of one or more parameters from the database table based
15 on the first identifier;

16 (5) process at least a portion of the first data packet based on the first set of one or
17 more parameters;

18 (6) update the first set of one or more parameters based on the processing; and

19 (7) provide to the database table, for storage, the updated first set of one or more
20 parameters.

1 34. (new) The network device of claim 33, wherein the communication network is a HomePNA
2 network.

1 35. (new) The network device of claim 33, wherein:

2 the first data packet further comprises a training preamble;

3 the first auxiliary coding is inserted within the training preamble of the first data packet.

1 36. (new) The network device of claim 33, wherein:
2 the first data packet further comprises a training preamble;
3 the first auxiliary coding is encoded using frequency shift keying (FSK) modulation by
4 frequency division;
5 the first auxiliary coding is encoded at a frequency different from a frequency for the first
6 data packet;
7 receipt of the first auxiliary coding overlaps in time with receipt of the training preamble
8 of the first data packet.

1 37. (new) The network device of claim 33, wherein the first auxiliary coding is received before
2 the first data packet is received.

1 38. (new) The network device of claim 33, further comprising a transmitter adapted to:
2 (1) generate a second auxiliary coding for transmittal with a second data packet, wherein:
3 the second auxiliary coding identifies a second identifier;
4 the second identifier identifies the transmitter; and
5 the second auxiliary coding is different from the second data packet;
6 (2) transmit the second auxiliary coding and the second data packet to a second network
7 device.

1 39. (new) The network device of claim 38, wherein:
2 the transmitter comprises a first RF front end; and
3 the transmitter is adapted to transmit both the second auxiliary coding and the second
4 data packet using the first RF front end.

1 40. (new) The network device of claim 38, wherein:
2 the transmitter comprises a first RF front end and a second RF front end;
3 the transmitter is adapted to transmit the second auxiliary coding using the first RF front
4 end; and
5 the transmitter is adapted to transmit the second data packet using the second RF front
6 end.

1 41. (new) The network device of claim 33, wherein the first auxiliary coding comprises five or
2 fewer symbols.

1 42. (new) The network device of claim 33, wherein the first auxiliary coding comprises five or
2 fewer bits.

1 43. (new) The network device of claim 33, wherein the first identifier is a station identifier for
2 the first transmitter.

1 44. (new) The network device of claim 33, wherein:
2 the first data packet header includes a source address for the first transmitter; and
3 the first identifier is not the same as the source address for the first transmitter.

1 45. (new) The network device of claim 33, wherein the first set of one or more parameters
2 comprises at least one of a receiving-equalizer start value, a timing-recovery start value, an
3 automatic-gain-controller start value, and an echo-canceller start value.

1 46. (new) The network device of claim 33, wherein the updating is based on moving averages,
2 from past data packets received from the first transmitter, of one or more of a receiving-equalizer
3 value, a timing-recovery value, an automatic-gain-controller value, and an echo-canceller value.

1 47. (new) The network device of claim 33, wherein:
2 the first auxiliary coding is received as a first set of pulses received substantially
3 immediately before the first data packet; and
4 the first identifier is encoded in the first set of pulses by variable timing intervals between
5 adjacent pulses in the first set of pulses.

1 48. (new) The network device of claim 33, wherein the database table is further adapted to store
2 the first identifier corresponding to each set of one or more parameters.

1 49. (new) A method for a network device for a communication network, wherein the network
2 device comprises a database table and a receiver, the method comprising:

3 (1) storing a first set of one or more parameters in the database table, the first set
4 corresponding a first identifier;

5 (2) receiving a first data packet comprising a header and a payload from a first
6 transmitter;

7 (3) receiving a first auxiliary coding corresponding to the first data packet, wherein:
8 the first auxiliary coding identifies the first identifier;

9 (4) recovering the first identifier from the first auxiliary coding;

10 (5) retrieving the first set of one or more parameters from the database table based on the
11 first identifier;

12 (6) processing at least a portion of the first data packet based on the first set of one or
13 more parameters;

14 (7) updating the first set of one or more parameters based on the processing; and

15 (8) providing to the database table, for storage, the updated first set of one or more
16 parameters.

1 50. (new) The method of claim 49, wherein the communication network is a HomePNA network.

1 51. (new) The method of claim 49, wherein:

2 the first data packet further comprises a training preamble;

3 the first auxiliary coding is inserted within the training preamble of the first data packet.

1 52. (new) The method of claim 49, wherein:

2 the first data packet further comprises a training preamble;

3 the first auxiliary coding is encoded using frequency shift keying (FSK) modulation by
4 frequency division;

5 the first auxiliary coding is encoded at a frequency different from a frequency for the first
6 data packet;

7 receipt of the first auxiliary coding overlaps in time with receipt of the training preamble
8 of the first data packet.

1 53. (new) The method of claim 49, wherein the first auxiliary coding is received before the first
2 data packet is received.

1 54. (new) The method of claim 49, where the network device further comprises a transmitter, the
2 method further comprising:

3 (1) generating a second auxiliary coding for transmittal with a second data packet,

4 wherein:

5 the second auxiliary coding identifies a second identifier;

6 the second identifier identifies the transmitter; and

7 the second auxiliary coding is different from the second data packet;

8 (2) transmitting the second auxiliary coding and the second data packet to a second
9 network device.

1 55. (new) The method of claim 54, wherein:

2 the transmitter comprises a first RF front end; and

3 the method comprises transmitting both the second auxiliary coding and the second data
4 packet using the first RF front end.

1 56. (new) The method of claim 54, wherein:

2 the transmitter comprises a first RF front end and a second RF front end; and

3 the method comprises:

4 transmitting the second auxiliary coding using the first RF front end; and

5 transmitting the second data packet using the second RF front end.

1 57. (new) The method of claim 49, wherein the first auxiliary coding comprises five or fewer
2 symbols.

1 58. (new) The method of claim 49, wherein the first auxiliary coding comprises five or fewer
2 bits.

1 59. (new) The method of claim 49, wherein the first identifier is a station identifier for the first
2 transmitter.

1 60. (new) The method of claim 49, wherein:
2 the first data packet header includes a source address for the first transmitter; and
3 the first identifier is not the same as the source address for the first transmitter.

1 61. (new) The method of claim 49, wherein the first set of one or more parameters comprises at
2 least one of a receiving-equalizer start value, a timing-recovery start value, an automatic-gain-
3 controller start value, and an echo-canceller start value.

1 62. (new) The method of claim 49, wherein the updating is based on moving averages, from past
2 data packets received from the first transmitter, of one or more of a receiving-equalizer value, a
3 timing-recovery value, an automatic-gain-controller value, and an echo-canceller value.

1 63. (new) The method of claim 49, wherein:
2 the first auxiliary coding is received as a first set of pulses received substantially
3 immediately before the first data packet; and
4 the first identifier is encoded in the first set of pulses by variable timing intervals between
5 adjacent pulses in the first set of pulses.

1 64. (new) The method of claim 49, further comprising storing the first identifier in the database
2 table.